

BUCKLEY ANGB, CO UTILITY SYSTEM DESCRIPTIONS

General: Buckley ANGB is owned by the Department of Defense (DoD) but is licensed to and managed by the State of Colorado Department of Military Affairs. Privatization activities will be coordinated with the United States Property and Fiscal Office (USPFO), which represents the National Guard Bureau on behalf of the Federal government

Buckley ANGB is located on 3,250 acres of land 10 miles southwest of the Denver International Airport. Within the Base perimeter there are four designed wetlands areas, and seven Installation Restoration Program Sites. Buckley is the only major military installation in the Denver metropolitan area, and operates and maintains its own airfield. Approximately 158 buildings are located on the base. There are no Base housing, dormitories, or billeting facilities currently at Buckley ANGB. However construction is under way on a dormitory to house 228 active duty enlisted personnel.

Buckley ANGB is currently undergoing construction of Phase II of the Installation Infrastructure Project. This project includes upgrading the main utility lines (water, sanitary sewer, electrical, gas, and storm water drainage) on the Installation, along with some road widening and realignment work. The 1997 Base Plan also identified a Phase III, which includes improvements to side streets and secondary utility lines, but does not provide a schedule for such improvements.

System Descriptions: The electric, natural gas, and water distribution systems and the wastewater collection system are being considered for privatization. The utility system information provided here is an estimate only and is subject to change.

Electric: PSC provides the majority of Buckley ANGB's power from a 13.2 kV feeder north of the base. There is also a secondary interconnection to PSC at the east side of the base. However, this interconnection is not used because of inadequate capacity. Inside the main gate, the base takes service from a metering station near the primary switch station. The 13.2 kV primary switch station and distribution system are Buckley ANGB-owned and operated.

The Buckley ANGB electrical distribution system from the switch station to the base facilities primarily consists of a concrete-encased duct bank with pad-mounted switches for feeder selection and interruption. East and west of the airfield, there are overhead distribution lines consisting of 35- to 40-foot-Class 2 poles with 3-phase, 4-wire construction on a single cross-arm. Over time, the overhead lines are being replaced with underground lines.

The circuit that powers the base east of the airfield crosses under the south end of the runway. The circuit under the runway is a cable in conduit that is enclosed in a boring sleeve; the circuit is direct buried on either side of the runway. Interviews with Base personnel reveal that this circuit has limited capacity and that it has experienced past outages. Although the circuit currently appears to be in good shape, the distribution loop around the Base should be completed to provide power to facilities east of the airfield should this circuit fail in the future.

Most of the transformers are pad-mount-type and are installed adjacent to buildings. Some transformers are unit-substation-dry-type and are installed in building vaults.

The electrical facilities considered for privatization are as follows:

- The main Base electrical distribution system from the point of demarcation with PSC (Aspen Drive and Winter Park Avenue) but excluding the secondary main switchboards and main disconnects.

- The remote electrical distribution systems to the south gate, OSI Complex, east base facilities including the airfield, but excluding mission essential navigational aids and the Marine Complex.
- Medium voltage equipment (greater than 600 volts).
- Conductors and conduits to the first secondary main disconnect for each facility.
- Street, area, security, ballfield, and parking lot lighting when not attached to a structure or on a pole 12 feet or less in height.
- Lighting control devices and circuits associated with the street, area, and ballfield lighting.

The ADSC, which has a separate electrical interconnection to PSC, and the Naval Reserve Center are excluded from privatization.

Natural Gas: Natural gas is supplied to Buckley ANGB by PSC through four connections. Each connection includes a PSC-owned pressure-regulating and metering station. Natural gas pressure is reduced from approximately 140 to 20 pounds per square inch gauge (psig) for distribution throughout the Base.

There are approximately 39,700 linear feet of gas distribution piping on the Base. Materials include PE piping and coated and wrapped steel piping. The Base is in the process of replacing the steel gas piping with PE. Pipe sizes range from 3/4-inch to 6 inches.

The natural gas facilities considered for privatization include the distribution system between the PSC meters and the building meter or, when there is no building meter, the building service regulator. Meters and regulators will be privatized. The ADSC and the Naval Reserve Center are excluded from privatization.

A natural gas pipeline currently enters the Base on the south side and feeds Building 1550. PSC owns the pipeline up to the building. The Phase II Infrastructure Improvements Project, currently under construction, will install a Base-owned gas line to that portion of the Base as well as to Building 1550. The PSC line will be capped when the new line is connected. **Since this paragraph was first written in 1999, this project may have been completed.**

The remaining cathodic protection system is being eliminated with the Phase II installation of PE piping.

Potable Water: Buckley ANGB obtains its potable water from the City of Aurora through a master meter at the Base perimeter near the intersection of Highway 30 and Aspen Street. A second City of Aurora meter and associated valving system are located on the south portion of the Base. However, water is only distributed through this meter during emergency situations.

The Buckley ANGB water distribution system considered for privatization consists of approximately 100,300 linear feet of ductile iron, cast iron, and polyvinyl chloride (PVC) piping and service lines. Piping sizes range from 3/4 inch to 20 inches in diameter. The water system also has approximately 180 fire hydrants and a fire pump station included in privatization scope.

Two water wells are located on Buckley ANGB. These wells provide water to a lake used for recreation on Base.

The ADSC and Naval Reserve Center are excluded from privatization. Demarcation points that establish the limits of the system considered for privatization are as follows:

- The system will start at the city-owned master meter and include all distribution piping and appurtenances up to and including the last isolation valve at each building.
- The private entity will own and operate the system up through and including the backflow preventers on branches from the main water line.
- The system to the ADSC will end at the isolation valve outside the secured area.
- The system will end at the valve pit near the south entrance to the Base.

No corrosion control system for the water mains and fittings was identified. Although the base soil conditions are unknown, lacking corrosion control in areas of corrosive soils may eventually result in deterioration of metallic mains and main breaks.

Based on minimal time spent on maintaining the Buckley ANGB water system and the lack of a corrosion control system, it is apparent that there is no preventive maintenance in place for this system.

Sanitary Wastewater: The Buckley ANGB wastewater collection system consists of approximately 58,000 linear feet of vitrified clay and PVC gravity sewer lines, ranging in size from 4 to 21 inches in diameter. The system also includes manholes and approximately 2,840 linear feet of C-900 force main and an associated duplex, packaged wet well lift station (approximately 260 gallons per minute capacity), with standby power.

The City of Aurora provides treatment of the wastewater generated by the Buckley ANGB. Most of the collection system drains into a sewer trunk at the northwest corner of the Base. A few buildings drain into another City of Aurora sewer trunk in the southwest portion of the Base.

The wastewater system at Buckley ANGB includes five oil/water separators and five septic tank systems, ranging in size from 1,500 to 10,000 gallons, which are not included in the privatization analysis.

The point of contact is Mark Young (mark.young@tyndall.af.mil), FAX 850-283-6336